

APPROVED MINUTES OF TECHNICAL ADVISORY COMMITTEE MEETING  
NOVEMBER 5, 2002

Members present: Unfortunately, I have misplaced the attendance list for this meeting.

Next meetings:

November 19, 2002, 1:00-4:00 p.m. Appalachian Gap Room, Cyprian Learning Center, Waterbury VT

December 2, 2002, 1:00-4:00 p.m. Appalachian Gap Room, Cyprian Learning Center, Waterbury VT

December 17, 2002, 1:00-4:00 p.m. Appalachian Gap Room, Cyprian Learning Center, Waterbury VT

Minutes:

The draft minutes of the previous meeting were not sent out to the committee. They will review them at the next meeting.

The subcommittee working on the hydraulic chart was asked if there were any comments on progress at this time. The report is not due until next meeting.

It was noted that the chart on page 10 of the original TAC committee final report is the most important chart, however, a person identifying a soil in order to use the chart should not simply rely on the cursory identification shown there i.e. "fine sandy loam"...the structure (how strong or weak the soil is) and similar data must be considered. The chart calculations based on slope are also simplistic ones. It was also stated that though many clay soils will not pass the desk-top study calculations, designers can design systems that will not surface. The design, however, could not be certified to calculate that the effluent will rise no closer to the ground surface than 6 inches.

The committee was asked if there are other solutions for Addison County. Reference was again made to the hydraulic chart. It was stated that the baseline performance standard is not surfacing at all versus surfacing a few days a year. It is believed that for a reasonable clay site with mottles at 10-12 inches, good soil structure, and a lot of available length for a system the Table, as constructed now, will say that such a site can be built on without a specific site analysis, but that if hydraulic conductivity parameters are lowered much more it will seal out those sites. This is no different for Addison County than it is for the rest of the state. The committee agreed that any guidance must be applicable to the whole program and not just one geographical area. The desktop hydrogeological study is provided so sites that can easily be determined to meet requirements based on conservative assumptions may be approved without the need for site specific work. The committee agreed that the chart needed to be completed and then used for some projects

to see how it actually functions in the real world. There was a discussion of the difficulty of doing site specific tests, such as slug tests, and particularly trench tests because the work of digging the trench in tight soils at certain times of the year smears the walls of the trench and reduces the hydraulic properties you are trying to measure. The tests are also costly.

The ideas being discussed were summarized as:

- A. The normal easy sites will work well with the chart.
- B. Addison County soils are somewhat unique, the chart may not apply.
- C. The performance standard of not surfacing can be met by systems for which the design calculations do not meet the requirement to stay 6 inches below the surface of the ground. The designers know this from experience with such systems but do not know how to “demonstrate” that the design will work. In certifying that a system meets the rules it is not only the 6 inch standard that is the problem, it is other standards such as isolation distances that are also a problem for these systems.

John Forcier noted that the training that is being set up will discuss some of the judgments required to analyze soils, and show that it is not black and white. The training will help eliminate the gaps between the black and white line and the judgements so that more people seeing a certain situation will have similar judgments.

There were several opinions on why consultants were unwilling to certify sites. The original statement was that it is not about whether the system would surface or not, it was about whether the regional office would approve the consultant’s proposal. Then the concern was redefined to be that it was about not being able to certify that a system would not surface. It was noted that the not-surfacing standard has been in place in New York for 17 years, at least, because dye tests are performed to make sure that the system does not surface when title is transferred. Several consultants said that the regional Offices usually agree on where the mottles are but it is a matter of the difficulty of justifying that the system will meet the requirements of the rules when it is a questionable site. Some said the “6 inches” is the issue others said: No, it is the liability that is the problem. Consultants are concerned that the state will enforce against them if the system fails if it is a judgment call design. In some cases the town standards have been less stringent than the state standards or there have been exemptions for systems on 10 acres...many systems would be designed with “cheater pipes” to the surface. The changes create a steep learning curve for clients who may not be able to build or have a lot of new expense and they are angry. Consultants do not want to do work on systems when the way the new rules will be administered is still in flux. If the state had no enforcement capability, that is, go back to the status before the rules, it would be a lot better. Consultants would not have to worry about being second-guessed. Consultants would like to be sure that the Regional Engineers will be receptive to new concepts.

There are some new innovative systems that could have criteria developed such as drip irrigation and systems that hold the effluent for a while and discharge it when the groundwater table is lower. No one knows how many of the sites where the consultant

designed “what would work” because there was no state permit required have surfacing systems or for how long they surface. They generally do not go back and check them out. Those that were reported are likely to be the worst cases. Other design concepts that can be developed are the two-year time of travel on your own property and the idea that standards will be different for areas where everyone is on a public water supply. These should be done, but there is no time until after the first of the year to look at the issue. First in time and isolation distances also need to be discussed as relates to the two-year time of travel.

The consultants acknowledged that before the new rules designing systems was a risky business and it is still a risky business. Things will adjust eventually and stabilize. Because the new rules include more marginal soils there will be more failures than there were before with the more conservative standards. However usually there will be lower actual flows than design flows so there is some safety factor there for most sites.

Licensed designer discussion:

The subcommittee presented the following draft for discussion

#### I Hydraulic Limits

- A. Mound systems up to and including 1000 gpd
- B. In-ground systems up to and including 2000 gpd
- C. At-grade systems up to and including 2000 gpd

Basis: hydrogeological studies required for systems with wastewater follows greater than those stated.

Comments...the statute limits site technicians to systems < 1350 gpd. This was because water supplies at 1440 gpd required hydro studies and the sewage rules flows for the number of SFRs below 1440 (three-3 bedroom houses) were 1350, so we settled on the lower number for a given project. Numbers should match for water supplies and sewage systems. Consensus that 1350 was the number of choice.

#### II. Wastewater Characteristics

- A. projects limited to domestic (sanitary) wastewater only.

Basis: treatment of process wastewater requires greater educational training than that required in the Environmental Protection Rules.

Comments...This can include wastes that the Division deems compatible with domestic waste. It does not include industrial discharges. Those require a UIC permit and site technicians should not do those. Q. What about treatment systems on the water such as softeners, radionuclides, iron manganese, arsenic. Some are

okay, some not... a document needs to be developed about this. Recycled water to toilets etc is domestic waste.

### III. Types of projects

- A. residential, including apartments and duplexes
- B. Commercial, when the on-site wastewater system is receiving combined residential/commercial wastewater. The residential flow component must be greater than the non-residential flow component.

Basis: Small-scale commercial projects, such as offices and stores, are sometimes combined with apartments. In most cases, the commercial component is less than the residential component.

- C. Subdivisions will be limited up to 9 lots.

Basis: Act 250 permits are not required for projects up to 9 lots. Amplified reason during discussion... Act 250 permits involve a lot of work that site technicians are not qualified to do, such as roads, stormwater, parking lots. (Actually Act 250 permits are required for more than 6 lots now).

Comments... site technicians can only do the work necessary to design systems covered by the rules, those other items are not part of their license authority from DEC. Wastewater from a school or office is no different than sewage from a home, the system design is the same. Places of assembly require special concern because of so many people. Places of assembly are simply one category of public water system. Public water systems require a professional engineer to design, so site technicians cannot do those systems. That will be a limit on the water supply side. The number of lots doesn't matter. There was agreement that site technicians should not design public water systems, and that the number of lots doesn't matter.

### IV. Other items for consideration

- A. Pretreatment systems will not be designed by site technicians.

Basis: Treatment of wastewater requires greater educational training than that required in the Environmental Protection Rules.

Comments... generally the pretreatment systems that site technicians will be using (for sanitary wastes only) will be "black boxes" approved for general use by the Department. Using those systems, as sand filters can now be used as a system by a site technician, is not considered "designing" a pretreatment system. Site technicians will not be allowed to design the "black box" itself. That requires more education and training than the licensing program will provide. It was noted

that there was no consensus to allow site technicians to use innovative systems approved for general use in their designs.

#### Further Discussion:

Perhaps there should be continuing education requirements. Should there be a gradual elimination of all grandfathered site technicians so that everyone must have taken the test. Does there need to be pre-qualifications to take the exam? There are none now.

The Plumbers licensing program had continuing education requirements and has worked very well.

Should site technicians be able to design water supplies for schools that are not public water supplies? What should be the restrictions if any?

Should there be a licensed designer category for well drillers. How about hydrogeologists? (Anne believes that we cannot provide a category for hydrogeologists).

Should the rules be changed to provide for disposal of leach bed waste? (Future discussion.)

#### Subcommittees

Hydrogeology - Allison Lowry, Craig Heindel, Dave Cotton and Steve Revell.

Training subcommittee - John Forcier, Roger Thompson, Allison Lowry, Dave Cotton, Barbara Willis and Marilyn Davis.

Licensed designers - Spencer Harris, Gary Fern, Alan Huizenga for Lance Phelps, and Gerry Kittle.

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